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FOREIGN TECHNOLOGY DIVISION

PARALLELOGRAM-TYPE SKI LANDING GEAR

by

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EDITED TRANSLATION

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ABSTRACT The invention deals with

This Author's Certificate introduces a parallelogram-type landing gear with skis. The installation contains forward and rear struts hinged to the skis and to the aircraft fuselage, with a shock absorber on the rear strut. To provide shock absorption in the longitudinal direction and increase the stroke of the shock absorbers, a diagonal brace with a shock absorber is fastened between the skis at the forward strut and the fuselage at the rear strut, and the forward strut is made rigid.

PARALLELOGRAM-TYPE SKI LANDING GEAR

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The invention deals with a parallelogram-type ski landing gear which includes forward and rear struts hinged to the ski and to the body of the aircraft, with a shock absorber mounted on the rear strut.

In known types of landing gear, a rigid brace connecting one of the struts to the aircraft body is usually used to fix the gear in the operating position. In addition, when ordinary strut-mounted shock absorbers are used on these types of landing gear, reduction of the active overload by increasing the movement in the shock absorbers is hampered because of small permissible clearances and shock-absorber weight.

The goal of the proposed invention is to provide damping in the longitudinal direction and to increase the overall movement of the shock absorbers.

This is achieved by providing the landing gear with a diagonal strut and shock absorber which is hinged to the ski at the joining point of the forward strut and to the aircraft body at the joining point of the rear strut and by making the forward strut rigid.

The diagram shows a kinematic sketch of the landing gear described above.

Ski 1 with forward rigid strut 2 and rear strut 3 with shock absorber 4 is hinged to aircraft body 5. Diagonal strut 6 with shock absorber 7 is fastened at one end to ski 1 at the hinge joint of strut 2, and at the other end to body 5 at the hinge joint of strut 3.

Damping in the vertical direction is provided by the independent action of shock absorbers 4 and 7 and in the longitudinal direction by shock absorber 7. In calculating the breakdown of forces while in a slanted position, shock absorber 7 provides a large permissible overall movement of the shock absorbers.

Subject of the Invention

The parallelogram-type ski landing gear, containing forward and rear struts which are hinged to the ski and to the aircraft body with a shock absorber mounted on the rear strut, is characterized by the fact that the landing gear is hinged to the ski at the joining point of the forward strut and to the aircraft body at the joining point of the rear strut, and the forward strut is rigid. All of this provides damping in the longitudinal direction and increases the overall movement of the shock absorbers.